Nature Reviews Rheumatology | Published online 29 Jun 2017

IN BRIEF

SYSTEMIC LUPUS ERYTHEMATOSUS

Tackling complexity through immunophenotyping

Researchers have used an immunophenotyping approach to categorize patients with systemic lupus erythematosus (SLE) into distinct subgroups. Peripheral blood mononuclear cells from 143 patients with SLE and 49 healthy individuals were analyzed by flow cytometry to characterize circulating B cells, T cells and dendritic cells. The resulting immunophenotype was analyzed by use of principal component analysis, and cluster analysis subsequently revealed three distinct subgroups based on T cell heterogeneity, including a T cell-independent group, a T follicular helper (T_{FH}) cell-dominant group and a regulatory T cell-dominant group. The percentage of patients with SLE who were resistant to immunosuppressive treatment was highest among the T_{FH} cell-dominant group.

ORIGINAL ARTICLE Kubo, S. *et al.* Peripheral immunophenotyping identifies three subgroups based on T cell heterogeneity in lupus patients. *Arthritis Rheumatol.* http://dx.doi.org/10.1002/art.40180 (2017)

RHEUMATOID ARTHRITIS

ACPA status influences RA development

A longitudinal study has identified differences in the clinical manifestations of patients with anticitrullinated protein antibody (ACPA)-positive ($n = 30$) and ACPA-negative ($n = 37$) rheumatoid arthritis (RA) during the pre-RA phase. Initial symptoms involved the lower extremities more often in the ACPA-positive group. At first presentation with arthralgia, ACPA-positive patients had a longer symptom duration, lower number of tender joints and less difficulty making a fist. However, ACPA-positive patients developed arthritis sooner after presenting with arthralgia than ACPA-positive patients.

ORIGINAL ARTICLE Burgers, L. E. *et al.* Differences in the symptomatic phase preceding ACPA-positive and ACPA-negative RA: a longitudinal study in arthralgia during progression to clinical arthritis. *Ann. Rheum. Dis.* http://dx.doi.org/10.1136/annrheumdis-2017-211325 (2017)

CRYSTAL ARTHRITIS

Combination therapy effective in tophaceous gout

The phase 3 CRYSTAL trial investigated the efficacy of combining lesinurad (200 mg or 400 mg), a selective urate transporter inhibitor, with febuxostat treatment for tophaceous gout. The proportion of patients achieving serum urate levels <5.0 mg/dl at 6 months (the primary end point) was higher among patients receiving 400 mg lesinurad in addition to 80 mg febuxostat than among patients receiving febuxostat alone. At all other time points (up to 12 months), 200 mg lesinurad plus febuxostat was more effective than 400 mg lesinurad plus febuxostat in achieving the target levels of serum urate.

ORIGINAL ARTICLE Dalbeth, N. *et al.* Lesinurad, a selective uric acid reabsorption inhibitor, in combination with febuxostat in patients with tophaceous gout: a phase III clinical trial. *Arthritis Rheumatol.* http://dx.doi.org/10.1002/art.40159 (2017)

THERAPY

Rheumatic disease after immune checkpoint inhibitor therapy

A retrospective analysis of a French registry including patients with cancer treated with immune checkpoint inhibitors revealed six cases of rheumatoid arthritis (RA) and four cases of polymyalgia rheumatica (PMR), which developed at a median of 1 month after exposure. Three patients who developed RA required DMARD therapy; the other three cases were treated with corticosteroids or NSAIDs. All four patients with PMR responded to corticosteroids.

ORIGINAL ARTICLE Belkhir, R. *et al.* Rheumatoid arthritis and polymyalgia rheumatica occurring after immune checkpoint inhibitor treatment. *Ann. Rheum. Dis.* http://dx.doi.org/10.1136/annrheumdis-2017-211216 (2017)